



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/534,723

11/08/2006

Henrik Ljungcrantz

10400C-000162/US

5601

30593

7590

11/23/2010

HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

MOORE, KARLA A

ART UNIT

PAPER NUMBER

1716

MAIL DATE

DELIVERY MODE

11/23/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/534,723	<b>Applicant(s)</b> LJUNGCRANTZ ET AL.	
	<b>Examiner</b> KARLA MOORE	<b>Art Unit</b> 1716	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

***Election/Restrictions***

1. Newly submitted claims 12-14 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the previously presented claims were drawn to a species wherein both upper and lower housing halves are opposing and co-incident housing recesses.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12-14 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 1716

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,820,329 to Derbinski et al. in view of U.S. Patent No. 4,226,208 to Nishida et al.

5. Regarding claim 1, Derbinski et al. disclose a device (10) for carrying out a surface treatment of a substrate under vacuum substantially as claimed, which comprising a housing (11) including at least two chambers (14-18) communicating with at least one vacuum source (although not explicitly detailed, such would inherently be present), at least one of the chambers being designed to serve as a vacuum lock chamber (14 ) which can be opened to the atmosphere and in which the substrate can be introduced and removed to access the remaining chambers, wherein the housing includes an upper housing half (12) and a lower housing half (13) peripherally joined, at least one of the housing halves having at least two symmetrically distributed recesses (each of the halves has symmetrically distributed recesses, see Fig. 1) which are intended to constitute at least some of the chambers (again, see Figure 1), together with a revolver (multiple structures, e.g., 20 and 28) pivotally mounted between the housing halves and including revolver recesses (21-25) in which the substrate is intended to be placed, wherein the housing halves under an action of a force generating member

Art Unit: 1716

(although not explicitly detailed, such would be inherently present to actuate chamber covers such as 46 and 54) (Note: 46 and 54 are considered to be part of each of their respective housing halves as they are located therein) is designed to be moved from a first position in which the housing halves, through tight, sealing contact with the revolver prevent rotation thereof, to a second position in which the upper and lower housing halves are separated from the revolver in order to permit rotation of the latter to predefined positions, and wherein at least one of the revolver recesses in the revolver at least partially coincides with one of the chambers allowing the substrate to be moved between the chambers. Also see Fig. 3.

6. However, Derbinski et al. fail to disclose the upper and lower halves joined by a flexible sealing member.

7. Nishida et al. disclose upper and lower halves of a vacuum device joined by a flexible sealing member (86) for the purpose of forming a sealed vacuum container (see, e.g., Fig. 2, 86 and column 2, rows 56-60).

8. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the upper and lower halves of the vacuum device in Derbinski et al. joined by a flexible sealing member in order to form a sealed vacuum container as taught by Nishida et al.

9. With respect to claim 2, the apparatus of Derbinski et al. is capable of providing a situation wherein from the second position the upper and lower housing halves are

Art Unit: 1716

designed to assume the first position when the force generating member no longer acts between the housing halves.

10. With respect to claim 3, the at least two symmetrically distributed recesses of both upper and lower housing halves are opposing and co-incident housing half recesses and the recesses in the revolver are through recesses. See, e.g., Figs. 1 and 3.

11. With respect to claim 4, the vacuum lock chamber is provided peripherally with a sealing member (27) designed to seal the vacuum lock chamber off from the remainder of the housing and from the revolver when the housing halves are in the respective first position. It is also noted that whether a sealing member or sealing members are provided they can be considered equivalent sealing mechanisms, wherein the courts have ruled that an express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

12. With respect to claim 5, the remaining chambers are also provided peripherally with sealing members (27) designed to seal off from the remainder of the housing and from the revolver when the housing halves are in the respective first position. It again noted that whether a sealing member or sealing members are provided they can be considered equivalent sealing mechanisms, wherein the courts have ruled that an express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

13. With respect to claims 6 and 7, Derbinski et al. fail to disclose explicitly how a vacuum source or vacuum sources are connected to the vacuum device.

14. Nishida et al. disclose a vacuum device comprising a common space connecting a plurality of chambers, wherein each of the plurality of chambers is capable of performing independent processing when in a sealed condition. Nishida et al. further provide a vacuum pump for the common area as well as each for each of the plurality of chambers enabling common evacuation when the chambers are in communication and individual evacuation when they are not. See, e.g., Fig. 2.

15. It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to have provided common and individual vacuum sources for the housing and the chambers in order to allow for evacuation when they are in communication with one another as well as when they are not as taught by Nishida et al.

16. With respect to claim 9, the sealing members are o-rings. See, e.g. Fig.1 of Derbinski et al.

17. With respect to claim 10, Derbinski et al. disclose the device substantially as claimed and as described above.

18. However, the structure of the force generating member is not elaborated upon.

Art Unit: 1716

19. Nishida et al. disclose the use of a hydraulic cylinder for the purpose of generating force to provide sealing contact between device structures (e.g., column 3, rows 32-38).

20. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a hydraulic cylinder as the force generating member in Derbinski et al. in order to provide sealing contact between structures of the device as taught by Nishida et al.

21. With respect to claim 11, the revolver recesses are through- recesses. See, e.g., Figs. 1 and 3.

22. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Derbinski et al. and Nishida et al. as applied to claims 1-7 and 9-11 above, and further in view of U.S. Patent No. 5,415,729 to Strasser et al.

23. Derbinski et al. and Nishida et al. disclose the device substantially as claimed and as described above.

24. However, Derbinski et al. and Nishida et al. fail to disclose the flexible sealing member is a metal bellows.

25. Strasser et al. disclose the use of metal bellows for providing sealing for the purpose of advantageously bridging larger spaces as well as forming seals that are considerably stronger (column ).



Art Unit: 1716

26. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a metal bellows as the flexible sealing member in Derbinski et al. and Nishida et al. in order to advantageously bridge larger surfaces as well as to form a considerably stronger seal as taught by Strasser et al.

### ***Response to Arguments***

27. Applicant's arguments filed 23 July 2010 and 1 September 2010 have been fully considered but they are not persuasive.

With respect to Examiner's reliance on Derbinski in rejecting the pending claims, Applicant has argued that with rather than the upper housing half and lower housing half moving under the action of a force generating member, chamber covers 46 or 54 are moved. In response, Examiner points out that each of the housing halves has been considered to include not only the outside surrounding structure, but also the structures found therein, as well. As chamber covers 46 and 54 are in the upper housing half and the lower housing half, respectively, they are considered parts thereof; and in rejecting the pending claims they are considered the parts thereof that are moved under an action of a force generating member to a sealing contact with the revolver.

28. It is also noted with respect to these perceived deficiencies, wherein the Applicant has argued that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the actual specific arrangement of the seal formed by movement of the housing halves and with respect to the flexible sealing member and the revolver) are not recited in the rejected

Art Unit: 1716

claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

29. In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the Nishida reference as set forth above with the Derbinski reference, the Examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, as pointed out above, Nishida discloses the use of a flexible sealing member for the purpose of (i.e. this is the motivation) forming a sealed vacuum container -- although quite simple that is the explicit rationale provided in Derbinski. There is no requirement that the explicit rationale be complex, especially if the provision of the claimed feature recited is not complex, in and of itself. As it is, the provision of a sealing member (flexible or not) between structures in vacuum technology is quite basic and would not involve a rigorous thought process for one of ordinary skill in the art exercising ordinary common sense, creativity and logic.

***Conclusion***

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLA MOORE whose telephone number is (571)272-1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1716

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karla Moore/  
Primary Examiner, Art Unit 1716